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A cluster analytic evaluation of the effectiveness of the Amherst Youth Center in reaching non-traditional youth in Amherst.

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A CLUSTER ANALYTIC EVALUATION OF THE EFFECTIVENESS
OF THE AMHERST YOUTH CENTER IN REACHING
NON-TRADITIONAL YOUTH IN AMHERST

A Thesis Presented

By

MICHAEL ALLEN GLISH

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE

May 1979

PSYCHOLOGY

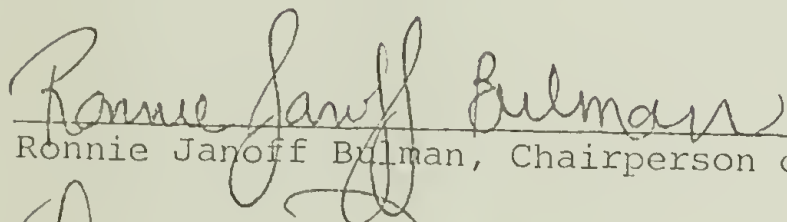
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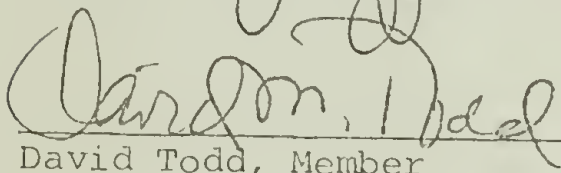
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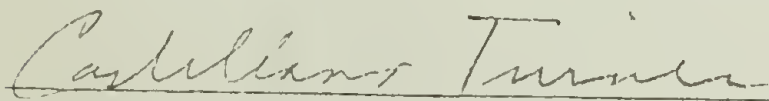
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This thesis represents far more than the research described in these pages. There could be no evaluation if there were no Youth Center, and there would have been no Youth Center without the help and support of a number of persons. I want to thank Dave Todd for his teaching and influence in my development as a community psychologist. There were many young people and a few slightly older people who were instrumental in creating the Youth Center itself. My thanks to Mickey Beals and Marietta Prichard, who worked hard but stayed in the background while I got all the attention in the newspapers; to Lou Hayward and Steve Sheiffer, who trusted me enough to hire me as the Center's first director; and to all the kids who spent countless hours in meetings, painting, hauling furniture, raising money, and finally actually coming to the Youth Center to have some fun. When it came to evaluate what had been done, George Brennan and Ronnie Bulman helped me formulate the research idea and more importantly gave me the necessary encouragement to go ahead and do it. Ronnie, Dave, and Cass Turner have been an excellent committee in working with me on all phases of my thesis.

I most want to thank my friend and mentor Peter Schneider

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Abstract

Drug use by young people in the 1960's and related drug problems were responsible for the growth of crisis centers and hot lines intended to cope with these problems. As the number of drug crises decreased, the focus of these programs broadened to include other concerns of young people who felt alienated from society and were reluctant to use traditional youth services. Descriptions and evaluations of such services are reviewed. These studies have primarily been descriptive accounts with occasional quantitative components intended to highlight aspects of the description. A similar description of the Amherst Youth Center is presented, an alternative youth program designed to serve those youth, ages 12-18, who were not being served by existing youth programs. The purpose of the present study is to describe the population of youth in Amherst in terms of their participation in a broad range of traditional activities and to determine how involved Youth Center attenders are in those activities. This would allow the evaluation of the effectiveness of the Center in reaching those youth who are not traditionally

involved. A 96-item questionnaire was given to 1364 junior and senior high school students during an extended homeroom period. The sample was divided into three age groups: 12 and 13 year olds, 14 and 15 year olds, and 16 and 17 year olds. Selected items from the questionnaire were factor analyzed to see which items contributed to a meaningful factor analysis. Those items which did not meaningfully contribute were discarded and the remaining questions were again factor analyzed, producing punched factor scores. Six factors were selected from each age group which represented traditional activities and interests. Using these factor scores to describe subjects' degree of traditional involvement, the subjects were put into groups using a cluster analysis according to how "traditional" or "non-traditional" they were. The clusters that emerged were represented by the means of each of the six factors. These means were added for each cluster to form a composite mean and the clusters were arranged accordingly, with a positive mean representing "traditional" involvement and a negative mean representing "non-traditional" involvement. When the number of Youth Center attenders in each cluster was determined, it appeared that the majority of Youth Center attenders in all these groups were "non-traditional" youth. A multivariate statistical test showed that this was true for the 12 and 13 year old group and the 14 and 15 year old group, but there was no difference in the 16 and 17 year old group

between the distribution of Youth Center attenders and the group as a whole. It was concluded that the Youth Center was reaching its intended population but that it was reaching only a small proportion of the "non-traditional" youth. This suggests that there is a need to improve the Youth Center's programs so a greater number of youth will be served. Certain improvements are suggested for the present model to make it more applicable for general use. Further evaluation of the effects of the program on youth is suggested, noting the difficulties of evaluating outcome in alternative youth services.

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C H A P T E R I

INTRODUCTION

The advent of widespread drug use in the 1960's by young people resulted in an explosion of community based programs such as telephone hot lines and drop-in crisis centers to cope with the large number of resulting drug problems (Baldwin, Liptzin, and Goldstein, 1973). Starting in San Francisco in 1966, these services developed in most big cities (Pattee, 1974), filling a vacuum in existing services for a segment of the youth population that was unwilling to participate in more traditional mental health programs. They were operated by and for youth to meet problems that the "establishment" would not understand. Most of the early centers were in a constant state of change and many lasted only a year or two because of organizational, financial, or legal problems. Although each program had its own brand of services, the typical drop-in counseling center offered 24-hour crisis phones, free counseling with a minimum of red tape, easily accessible contacts, emergency shelter, and information and referral (Clark and Jaffee, 1972).

As the frequency of acute drug crisis decreased during the early 1970's, centers offering a narrow range of drug related services had to expand their range of concerns to

justify their existence (Baldwin, Liptzin, and Goldstein, 1973). The centers expanded into other areas of young people's lives to include other growth-oriented programs such as workshops, tutoring, training programs, and recreational activities. As the centers changed, they continued to serve the needs of the young people with whom they had originally been concerned. These youth have been variously called counter-culture or alienated youth (Toigo and Kaminstein, 1972; Westhues, 1972; Baldwin, Liptzin, and Goldstein, 1973; Reinherz, Heywood, and Camp, 1976). These young people have been described as discontented with and distrustful of the established social order, including its values, structures, and systems. They often feel detached and alienated due to their value conflicts with society. Those who experience this conflict most acutely tend to be confused, conflicted, insecure, defensive, and distrustful of being helped (Clark and Jaffee, 1972). To the dominant culture, the behavior of these young people seems disturbed, warranting treatment of some kind to return them to the behaviors and values of the mainstream.

While many counterculture youth believe that social services can be helpful, they are reluctant to make use of traditional social services because these are seen as agents of social control on the part of their family, school officials, and police. They know that they have been labeled as troubled or mentally ill because they act in accordance

with what they feel are acceptable beliefs about using drugs, ways of spending leisure time, vocational interests, and other aspects of one's life style. When these young people pursue their interests in areas outside of the traditional arena of school, family life, church, and other organized activities, their reasons are invalidated by the larger society. When the youth do experience difficulty with life, they are reluctant to turn to traditional helping institutions because they are wary of receiving help which may be inconsistent with their values (Westhues, 1972).

[Whether troubled or not, alienated youth look for trusting, intimate relationships with others who will value them as persons and who will accept their interests and beliefs as worthwhile. The alternative social agency provides a setting that legitimizes these desires by being staffed by adults who share the interests and values of the young people, and who are supportive, understanding, and tolerant. In most alternative settings, the role of counselor and client is diminished, if not eliminated. The staff members are usually seen as peers and potential friends, thus reducing the stigma of being involved in traditional services where young people are identified as victims, as needing help, or as less competent persons.] The centers themselves tend to be located in informal settings such as a house or a storefront where people are free to drop in whenever it is convenient. There are no waiting lists or appointments.

Staff are usually on hand for both informal recreation and conversation as well as ready to listen when a crisis or other need for counseling arises. But it is not necessary for a person to feel he or she has a problem to come by.

[Often counseling naturally is a by-product of relationships that are formed between staff and youth around informal activities (Westhues, 1972). Although the atmosphere of the alternative settings is usually informal there are usually links with the traditional services in the community such as hospitals, schools, police, and other mental health agencies.

Alternative social agencies are in a precarious position in most communities (Clark and Jaffee, 1972). Such agencies have usually been created in recognition of the failure of traditional approaches to make inroads among adolescents. The agencies are funded by and staffs are hired by a community organizations such as the local government or mental health agency. Even privately run centers are dependent on community funds or grants from outside organizations to provide support. Often the immediate supervising structure as an advisory committee or board of directors comprised of parents, business people, clergy, etc. These people represent the traditional concerns of the community. Although they are usually sincere in their wish to be helpful to young people, they are also interested in having young people act in terms of the norms of their community and wish to

control socially unacceptable behavior. Realizing that a non-traditional organization will operate in a way that is not familiar, the advisory board will only tolerate a limited degree of variance from commonly accepted norms of what constitutes "treatment" and "help".

According to Clark and Jaffee (1972), staff members are usually either innovative professionals or counter-culture individuals. Innovative professionals are interested in work settings and treatment approaches that allow them more freedom in working with young people than they find in traditional mental health settings. While their values are still rooted in the traditional approach to treatment, they serve as a more appealing way to attract youth who would not normally seek traditional assistance. Counter-culture staff workers themselves feel alienated from the dominant culture and strive to change society by changing the institutions in which they are involved. Often drug use is an accepted activity, and is a topic of concern only when it is causing difficulties in someone's life. Rather than try to reorient alienated youth to traditional values, counter-culture staff want to create a place where youth can explore themselves and grow in an atmosphere of trust and acceptance. With the innovative professional model, potential conflicts can arise between the staff and the youth if the latter feels like they were being coopted. Conflict can occur in the counter-culture model if the staff begins to tolerate behavior or

philosophies that are not acceptable to the advisory board. Regardless of the kind of staff, a delicate balance has to be maintained among advisory board, staff, and youth to keep the program functioning well. Neither the traditional value of the community nor the non-traditional views of the youth can entirely prevail. The staff is caught in the middle and has the largest responsibility to maintain the balance (Westhues, 1972).

Evaluating Youth Service Programs: Descriptive Attempts.

As alternative organizations began to expand their focus into non-drug areas of young people's lives, they began to compete for both clients and resources with traditional services. Particularly when governments at local, state, and federal levels began to cut funds for social programs, alternative agencies were forced to show their effectiveness to remain in existence. Even if they could show they were effective, they had to prove that they were reaching a segment of the youth population that otherwise would not be reached by existing agencies. Unfortunately the same criteria which traditional services were judged by were applied to alternative services as well. But the patient/client model which readily lends itself to intake, assessment, and outcome measures was not applicable to alternative social services, where participants are not viewed as clients, where traditional therapy does not take place, and where

many participants remain anonymous (Kern, 1974). Outcome information is difficult to obtain under these circumstances. Another important factor is that improvement criteria are often very different in an alternative setting. The elimination of drug use, for example, a common goal in more traditional drug programs, may not be a goal in an alternative drug center where drug use is not seen in terms of healthy/sick but more often in terms of whether or not it is useful to the person involved. Consequently, the alternative agency may consider that it is meeting its goals quite well, whereas traditional evaluators may see things quite differently (Baizerman, 1974).

There are relatively few published evaluations of alternative youth services. There are few satisfactory ways of evaluating alternative agencies (Kern, 1974). The staff members are usually paraprofessionals and often are volunteers, hence there is often a lack of research skill or time to devote to research. Research consultants are frequently unavailable or would cost too much. When research is done, it may only be presented to advisory groups or to funding agencies. Because of the lack of research skill, evaluations may not be of publishable quality. The evaluations of alternatives that are published are primarily descriptive in nature. Some authors have used some form of quantification, but usually only to more fully describe some aspect of the program.

Spivak and Troupe (1973) describe what they consider to be a "model" comprehensive drug abuse and therapeutic intervention program, the "Brotherhood of Man". The major purpose of the program is to help clients to establish more mature relationships and coping behaviors, thus reducing the need to escape through drugs. The program is staffed by paraprofessionals who are supervised by a small staff consisting of psychologists and a physician. The program offers a hot-line, a drop-in center, walk-in counseling, and community outreach. An extensive staff training program is featured for new staff members, as well as in-service training and supervision for older staff members. The Spivak and Troupe (1973) article consists mainly of a detailed description of these aspects of the Brotherhood of Man, although the authors comment on the perceived effectiveness of the program. For example, the training and supervision component is judged as being "high quality" and the program as a whole is deemed "a respected and helpful service". The reader must take the authors' word for these suppositions or else infer from the description that the Brotherhood of Man is an effective organization.

Baldwin, Liptzin, and Goldstein (1973) describe the chronological development of a system of youth services in Chapel Hill, North Carolina. These services consist of a multi-service agency, a residential treatment center for heroin addicts, and a foster home for runaways. The

effectiveness of these programs is discussed within the organizational framework of the agency. All the services are controlled by a citizens committee whose responsibility is to keep the program accountable to the community. In an attempt to more effectively reach the counter-culture clientele, the board encouraged [the use of peer-counselors as a major mode of intervention at the multi-service agency.] The conflict arising between the citizen committee, the youthful staff, and the users is discussed. The services are considered to be effective, although the authors present no specific criteria of effectiveness.

Toigo and Kaminstein (1972) also discuss the problem of community accountability where serving disaffected youth. They begin by defining "cooptive intervention" as the process of attempting to control illegal or socially undesirable behavior through a modified utilization of the same supporting subculture that encouraged the development of the behavior in the first place. Toigo and Kaminstein claim that this is the principle used by most alternative youth programs to change the behavior of alienated youth. This is the explicit operating philosophy of the storefront drug center described by the authors. Knowing that counter-culture youth spurn drug information given through traditional sources, the program uses former drug users as staff members. The operation of the drug center is outlined, but particular emphasis is placed on describing the relationship between the community

and the drug center attenders. The conclusion is that the community is reconciled to the existence of the center so long as it does not condone blatant drug use. The drug users are satisfied with the service as long as it does not become too traditionally oriented.

Dwarshius, Kolton, and Goroclezky (1974) studied 72 innovative drug programs. They discussed the common features of the programs and some of the problems encountered. Most were young (less than five years old), paraprofessionally staffed, and oriented toward counter-culture youth. While described as innovative, more than 75% of the services studied featured traditional services such as referral services, crisis intervention, family counseling, group counseling, and education. Their innovative nature was reflected in their settings, use of techniques such as meditation and yoga, and the informal, voluntary relationships between clients and staff.

In another review article, Kohler and Dollar (1976) state that youth alienation stems from adolescents' delayed entry into adulthood, thus relegating them to a socially useless role at a time in their lives when they want to be effective in their environment. A number of programs are reviewed that are intended to increase youth involvement in their schools and communities. Not all programs originate from alternative youth programs, but the goals are similar. The "treatment" approach common to the programs cited is

that by increasing youth responsibility, both in their lives and in the lives of others, and by creating a partnership between adults and youth, that alienation will diminish as young people are taken seriously.

A similar philosophy is held by the staff of "The City" in Boston (O'Brien and Lewis, 1975). The staff is largely made up of high school students who counsel, lead workshops, and plan and implement social events and fund raising. The authors describe the various aspects of the program, but they emphasize The City's interrelationship with other human service agencies in the area. The effectiveness of the program is evaluated by describing examples of cooperation with police, schools, local youth recreation programs, the hospital, mental health workers, and the clergy.

The descriptive evaluation approach emphasizes the details of the programs' operation and organization. In some cases the functioning of the program is discussed in terms of philosophical or theoretical issues such as the cooptive intervention approach of Toigo and Kaminstein (1972). Others, such as Kohler and Dollar (1976), seem to be more informative than evaluative. In all cases, the basis of evaluative statements is unclear.

Evaluating Youth Service Programs: "Quantitative" Attempts.

Other authors have used some form of quantification in describing and evaluating their programs. Clark and Rootman

(1974) describe a method used by the Calgary Drug Information Center to record client contacts. Every contact is recorded on a form which asks for a description of the client by age, sex, residence, service requested, drug involved and degree of current drug use, and a simple description of symptoms. The majority of contacts were for information (48%) followed by crisis intervention (20%) and counseling (13%). The most detailed records were kept for clients who came to the center with some kind of crisis. A total of 75% of the crisis contacts were rated by the staff as either "moderate" or "heavy". About two-thirds of the cases were followed up by the center staff, the other third were referred to other agencies. An unspecified number of the center's follow-up clients were asked to rate their improvements. Most (79%) said they had improved, 18% felt there had been no change and 3% said things were worse. Most of the crisis contacts (55%) involved use of LSD or other hallucinogens. A smaller percentage involved the use of alcohol (10%) and opiates (10%). All records were kept monthly, allowing evaluation of trends in drug use and type of service requested. The authors conclude that the high degree of use of the center substantiates the need for that kind of service in the Calgary area. Records from other agencies indicated that the center dealt with the largest proportion of drug problems, further indicating the effectiveness of the program.

A similar method was used by Westhues (1972) to evaluate the Domino Drop-In Center. Questionnaires were distributed to an unspecified sample of users of Domino asking questions about sex, age, race, frequency of attendance, length of visits, arrest history, frequency of panhandling, current drug use, and services needed. The attenders were primarily white males aged 16-22 who came less than once a day but more than once a week. A total of 78% had a history of at least one arrest. The same percentage used drugs of some kind. The largest area of need was for survival items such as food, medical aid, and clothing. A much less common need was for some kind of counseling or other psychiatric services. A breakdown by age, however, showed that younger attenders requested counseling more often than the older attenders. This was interpreted to mean that only the younger attenders were interested in trying to reintegrate themselves into the mainstream of society. Westhues comments that the atmosphere is one of "retreatism" where attenders sit around and talk or listen to music but are not interested in either personal or social change. These observations in conjunction with the data lead Westhues to conclude that the drop-in center users constitute a marginally deviant population, not integrated into the dominant society, who have a great deal of time at their disposal. He describes the users as actually being in conflict with the staff to the extent that the staff is trying to redirect the community's

tolerance of its deviant members, but the users are not interested in much more than getting their basic needs met and do not seem interested in the larger social issues. No assessment is made about the success of either group in achieving its goals.

Pattee (1974) describes both the users and the staff at "Number Nine", a youth operated crisis/counseling center in New Haven, Connecticut. The purpose of the study was to develop a demographic profile of the users of Number Nine, compare the users to the staff to see if they were similar, and to see if Number Nine had been successful in breaking out of traditional therapeutic and sex-role patterns. A combination of interviews with users and descriptions of users by the staff were used to obtain the demographic profile. Examples of information obtained were sex, race, age, social class, residence, and previous mental health contact. The staff was described in the same way and the two groups were compared in each category, using a chi-square test to determine significant differences. The two groups were not different in their proportions of sex, residence, or race. The staff was older than the users, of a generally higher social class, had less previous mental health contacts, and had a higher amount education. The users were further broken into three categories: frequenters (those who came often, but were not involved in counseling), counselees, and drop-ins (infrequent attenders). These three

groups were compared on the same dimensions that the staff and users had been compared. The only similarities were social class and previous mental health contact. Notable differences were that males tended to be frequenters while females tended to be counselors, attenders tended to be high school dropouts or older persons who were not in college, and counselees either lived in broken homes or alone. The majority of all attenders came to Number Nine because of drug, family, or personal problems, although a large number (20%) came for "general reasons" such as liking the people there or just to hang around. A breakdown by type of attendance showed that even though frequenters were counseled less than those actually seeking counseling, a majority of those (52%) still received counseling. There was no significant difference in who received counseling when social class was considered. It was concluded that there was no significant differentiation between staff and attenders, and this was considered one of Number Nine's major advantages. There was some concern that traditional sex-role patterns were being supported since males seemed to reject counseling whereas females did not. Also females tended to have male counselors which was seen as a reinforcement of a paternalistic stereotype. Pattee (1974) maintains that Number Nine is a successful non-traditional agency, although that statement seems to be based more on subjective, rather than objective, criteria.

Allen and Marshall (1973) take a different approach in evaluating the effects of Youth Eastside Services (YES), an adolescent drop-in and service center. Rather than look at the features of the center itself, Allen and Marshall surveyed adults and young people in the community served by YES regarding their perceptions of priorities, needs, and agency effectiveness. The agency served two school districts, so adults from each district were surveyed as well as youth from each secondary grade from each school. The first district is closest to the agency and largely urban, the other district is more rural. The survey asked questions regarding attitudes about the relative importance of youth problems, evaluation of the effectiveness of various sources of help in the community, evaluation of YES in dealing with youth problems, the number of respondents who had gone to YES or would consider going, and the reasons why someone would not go to the agency. The results were analyzed using an analysis of variance using age and district as the two factors. Family, drugs and school were seen as the most pressing problems. These were rated as being bigger problems by adults than by adolescents, while problems with the law were rated as more problematic by adolescents than by adults. Adults and youth both preferred the kinds of services offered by YES to more traditional services. Residents of the urban district seemed more aware of YES services than the rural district's residents, although a generally

high awareness was evident throughout (75% or more had at least heard of YES). Nearly half of the total sample said they would be willing to go there. Most people identified YES with drug treatment rather than helping with general adolescent problems. This was in accord with the initial goal of the agency, but not with its contemporary goals. But the agency did receive high ratings of success in all of its programs for youth. The authors concluded that the agency was a needed community resource.

Reinherz, Heywood, and Camp (1976) use pre- and post-test data and client ratings to determine the effectiveness of the Counseling Center, an adolescent drug treatment center. The clients of the center were older adolescents characterized as alienated teenagers on the fringe of their adolescent subculture who were having trouble in coping with major developmental tasks. The clients' drug use made them appear to belong to the counter-culture, but the authors claim that other evidence showed that the youths were still deeply rooted in the middle class values of their town. Rather than focus on drug use alone, the staff's treatment emphasized total development, including achievement of independence, growth of a clearer sense of identity, and increased self-understanding. Their criteria for improvement were rooted in behavior and development such as ability to work, to cope with school, to handle family difficulties,

and relationship with peers. Reduction in drug use was secondary to these goals. Adolescent expectations were similar, if more simply stated. The majority wanted to "get my head together". The Center emphasized informal relationships between staff and clients and provided informal recreation as well as more formal counseling. A self concept scale was administered to the clients before they began treatment and one year after treatment. There was a significant improvement on the total self concept as well as on the eight sub-scales which included identity, self-satisfaction, personal self, family self, and social self. Other aspects of the clients' lives also seemed to improve; destructive behavior decreased and constructive behavior increased. Drug use decreased and in some cases was eliminated. The majority of clients rated their improvement as better in such areas as work, school, friends, and parents; most said the Center had an effect in causing these improvements. A total of 89% said they increased in their understanding of themselves and attributed this improvement to the center. The authors note that the lack of a control group limits the ability to attribute a cause and effect relationship between the center's program and the improvement in the clients, but they take the results to mean that the center was effective. They note that the key to success was the sensitivity of the staff in dealing the youth "where they were" and in offering a variety of

services that clients could use according to their needs without having to feel they had been labeled as deviant.

The quantitative efforts of evaluating alternative youth agencies are closely related to the descriptive studies previously cited, using numbers to more precisely describe the attenders and the staff of the agency. Description of the clientele allows the agency to say they are reaching a certain population they may wish to serve. The survey of the population served by YES (Allen and Marshall, 1973) led the authors to conclude that the community was satisfied with the program and that YES was working on problems seen as important by the community. Reinherz, Heywood and Camp (1976) conducted the only study in which clear evaluation criteria were stated and the statistics were related to those criteria. Although this was the only study that involved outcome measures, the authors point out that assessing successful outcome is difficult because of differing perceptions of what that constitutes among the groups involved. Kern (1974) states there are two kinds of methods useful in evaluating alternative agencies. The first method he calls process analysis which entails evaluating the steps by which agencies reach their programmatic goals. The second method is product analysis which evaluates the extent to which these efforts produce a successful outcome in the persons utilizing the agency. Kern suggests that a well-executed process analysis would provide a satisfactory basis for partial

judgement of effectiveness since the ability to reach organizational and process goals is at least a prima facie indication of the potential ability to achieve ultimate outcome goals. A good product analysis would have to contain clearly stated goals as well as clearly stated criteria of what constituted successful achievement of those goals. With the exception of the Reinherz, et al. (1976) study, all the studies cited fail on both counts as adequate process evaluations of their respective programs.

Present Study. During the summer of 1975, a chain of events began that culminated in the establishing of an alternative youth service in Amherst, Massachusetts. Amherst has approximately 1800 young people ages 12-18, comprising 5.6% of the total population of 33,000 (1975 projection from the 1970 census; Needs Assessment Committee, 1975). As an academic community with a large college-age population, most of the educational, recreational, and social opportunities are oriented toward that group of people. Similar opportunities for the adolescent population are meager. Although a large portion of their day is taken up by being in school, and after-school activities such as sports and clubs are available, the majority of junior and senior high students leave when school is dismissed. In spite of a popularly held belief that most students were engaged in profitable leisure time activities

after school and in the evening, problems such as shoplifting, drug and alcohol use, vandalism, and "hanging around" in town began to indicate that there were not enough things for young people to do in Amherst. In the summer of 1975, a series of articles in the Amherst Record took note of the large numbers of youths hanging out in the center of town and publicized the so-called "youth problem" that summer. Concerned by this growing awareness, the Board of Selectmen asked the Citizens' Advisory Committee (CAC) to investigate the "youth problem" more thoroughly. The author, who had begun working with a church youth group at about this time, was also concerned about the lack of activities available for young people. He became aware of the CAC study and began to meet with them in February, 1976. At this time, the focus of the study was shifted to investigate youth needs, rather than problems, and a formal needs assessment was initiated. The needs assessment (Youth Needs Assessment Committee, 1976) showed that the typical problems of drugs, alcohol, shoplifting, hanging around with nothing to do, lack of jobs, vandalism, runaways and violence existed and that there was very little to do other than the traditional school activities and church activities if you were under the age of 18. School officials in particular said that there was no way for them to meet all the needs of youth immediately after school and that it was impossible for them to even attempt to meet their needs in the evening,

on weekends, and in the summer. Of the few other organizations that existed, most were ill-equipped to handle more than the small percentage of youth who were already participating in their activities. The youths themselves said that what they needed was a place to hang out, a place where they would be welcome. Drugs, alcohol, and vandalism were seen as recreational activities symptomatic of boredom, rather than as psychological problems.

The clearest statement of need was, "I need a place to go." It was found that young people were not welcome in stores or restaurants if they were not going to spend money. The police would disband groups of youths who were congregating on church steps, in parking lots, or in front of stores. Unless a person was involved in a team sport, there were no gym facilities available for informal sports or games. There was an indication that many of the young people were interested in some of the same kinds of activities sponsored by the school but that they did not like the atmosphere of the school, or perhaps they were not good enough to be on a sports team or in a drama production. Some of those interviewed were eager to relate to adults in a way that was different from the way they related to their parents or teachers, both for friendship and for counseling.

A program was created that was intended to be responsive to the needs expressed in the needs assessment. Realizing that every need could not be met, the program was

focused on young people ages 12-18 who were not being served by existing school, church, or other traditional community activities. A few rooms of an old school building in North Amherst were converted to a youth center, the purpose of which was to provide a relaxed, informal atmosphere with refreshments, pool, ping-pong, and other games, where people could drop in and meet their friends. The Center opened in July, 1976, and gradually offered other programs such as outings, softball games, tutoring, nursing home visits, dances, trips, and a work-study program. The Center was staffed by a full-time paid director and part-time volunteer interns from local colleges. Counseling was available on an informal and crisis basis, although it was not intended to be a specific offering of the program.

As the Youth Center became more well-known, attendance began to grow and more programs were offered. But as the program expanded, its impact on the surrounding community became more pronounced. Vandalism and objections by local merchants began to raise doubts in the community as to whether the Youth Center was a constructive program. At the same time, competition began to grow among the town's human service agencies for resources that were being directed toward the Youth Center. The town government's support began to waver, increasing concern by the Youth Center staff that others were not regarding the program as a necessary service and that its existence was threatened. It was felt that if

the effectiveness of the Center could be documented that the Center would be in less danger of losing town resources and that the community support could be raised to counter existing complaints. The present research is a result of the desire to evaluate the effectiveness of the Youth Center. The first question was whether the Center was in fact reaching those young people who were not currently being served by traditional activities. If this question could be answered affirmatively, the need of the Center and its services would be evident. The evaluation of the services themselves and their effectiveness could be assessed in future studies.

In several of the studies cited above, the users of the alternative agencies were described as a group, but not in relation to the youth population in their community as a whole. Consequently only intuitive assumptions could be made as to how different they were from any other group in the community. Also the youth were described in terms of such criteria as drug use, arrest history, educational attainment, and, in one case, frequency of panhandling (Westhues, 1972). These are not very descriptive when one considers the broad range of possible activities open to young people, and more importantly, the choice of those categories indicates certain negative assumptions about what non-traditional youth are like.

The purpose of this study was to describe the population of youth in Amherst in terms of their participation in

a broad range of activities, including both traditional and non-traditional activities. This would provide a baseline against which Youth Center attenders could be compared, so that a determination could be made as to whether they were in fact the "non-traditional" youth in the community. The population description would also indicate the relative size of the non-traditional sub-population, hence a further determination could be made of how effectively the Center was reaching those youth.

C H A P T E R I I

METHOD AND RESULTS

Subjects. The subjects were students from Amherst Regional Junior High School and Amherst Regional High School. All the students in grades seven through eleven were asked to fill out a questionnaire during an extended homeroom period. Seniors were not surveyed because they had already graduated and were not in school. A total of 1364 questionnaires were returned, 1178 of which were used in the study. This represents an 86% return rate (see the "Item Selection" section for criteria used to reject questionnaires not used). There were 332 subjects in the 12 and 13 year old group, 448 subjects in the 14 and 15 year old group, and 298 subjects in the 16 and 17 year old group.

Questionnaire. The questionnaire (see Appendix A) was constructed by a group consisting of the author, several Youth Center staff members, and several Youth Center attenders. The intention was to construct an instrument that was reliable and valid as well as interesting, colloquial, and easy to answer. A format using closed response questions was chosen so the questionnaire would be easy to answer and could provide a great deal of information in a brief

administration time. A five-point Likert scale was used for the majority of questions: (1) never, (2) rarely, (3) sometimes, (4) often, and (5) always. The remaining questions provided a choice of specific alternatives.

The questionnaire construction group initially determined what general topics should be covered in the survey. These were demographic information, places where young people "hang out", organizational involvement, weekend activities, involvement in home and family life, opinion of town and school, personal problem solving methods, means of transportation, and Youth Center evaluation. A list of possible questions was mimeographed and given to the Youth Center staff, several adults, and several youths for feedback and suggestions for other questions. A rough draft was written from the collected responses. Pilot trials were conducted with a variety of young people to assess the readability, ease of answering, and time necessary to complete the questionnaire. Additional feedback was requested from those participating in the pilot runs, and from those suggestions a final draft was written. The completed questionnaire had 95 questions and required about 10-15 minutes to complete. Sixty-six of the questions yielded interval data, 10 yielded ordinal data, nine yielded categorical data, and 10 yielded dichotomous data.

Administration. Permission was obtained from the coordinating

principal of the junior high and senior high schools to administer the survey in homeroom. Homeroom period was chosen because it was a regular part of the school day and it was a time when every student who would be at school would be in attendance. Homeroom was extended to 20 minutes to allow sufficient time for the questionnaire to be completed. The questionnaires were given to homeroom teachers, but were actually handed out by a student in each homeroom. When the questionnaires were completed, they were picked up and taken to a central collection point so that teachers would not have any opportunity to see the responses. An introduction printed at the top of the questionnaire informed the students that the purpose of the survey was to find out how young people spend their time and that the results would be used to plan programs for youth. The involvement of the Youth Center in conducting the survey was not mentioned so as to minimize the chance of biased responses in favor of or against the Youth Center.

Item Selection. An identification number was given to each questionnaire after it was returned. Questionnaires were not used if there were more than five missing responses or if other indications showed that the respondent did not answer seriously.¹ The answers were punched on computer cards which were analyzed as three discrete groups: 12 and 13 year olds, 14 and 15 year olds, and 16 and 17 year olds.

A frequency count and mean was obtained for each question. Questions which had responses fairly evenly distributed among the possible choices were selected for further analysis. Questions with narrow distributions of responses were eliminated since they would not aid in discriminating among subjects in the factor and cluster analyses. Further questions were eliminated if it seemed that they would not contribute to a meaningful factor analysis.² It should be noted that all the questionnaire answers were useful to the Youth Center staff and therefore some questions were included that were not going to be used in the factor analysis, but were nonetheless important to ask. The final set contained 49 questions, all of which yielded interval or ordinal data.

Factor Analysis. Classical factor analysis was used because it was assumed that underlying factors represented the subjects' responses to the questions. Therefore, correlations among questions were assumed to be due to common factors. The SPSS factor analysis was used (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) specifying the PA2 factoring method. This method extracts as many uncorrelated common factors as is necessary to account for a sufficient amount of the variance. The quartimax rotation was chosen so that the loading of each variable (i.e. each question) would be a maximum for one single factor and nearly zero on all others. This facilitated later interpretation of the factors since each

question would presumably load highly on only one factor, thus reducing the occurrence of overlapping factors.

The three age groups were expected to differ developmentally from each other; therefore it was assumed that both the underlying factor structure and the loadings of each question on these factors would be different. An initial factor analysis was performed to discover which questions made either no contribution or an ambiguous contribution to the formation of factors for each age group. Questions which did not have loadings of more than .30 on any question were removed. In a few cases, questions with only moderate loadings (.20 - .40) on several factors were also removed because of their ambiguous contribution to the interpretation of the factors. A second factor analysis was performed on the remaining questions. Factor scores were computed and punched on cards for later use. Each factor was interpreted by considering the relationship of all the questions with factor loadings of .30 or greater (or $-.30$ or less).

A total of 14 factors resulted from the analysis of both the 12 and 13 year old group and the 14 and 15 year old group. Fifteen factors emerged in the 16 and 17 year old group. Preliminary cluster analysis runs showed that six factors were the optimal number for good clustering, so six factors were chosen to be used in the final cluster analysis. Four factors, labeled "partying", "housework",

"parents", and "sports" were common to all three age groups. Three other factors, labeled "organized activities", "school", and "dating" appeared in two groups each. The remaining factors were not used because they were unique to their respective age groups, and therefore would not be useful in comparing the groups. The factors chosen seemed to adequately represent a broad range of adolescent involvements and interests and it was felt that they would produce meaningful clusters.

The "partying" factor is characterized by getting drunk, getting high, being with a group of friends, and not staying at home on weekends. Questions relating to going to bars, dances, parties, concerts and dates also loaded high on this factor. "Partying" included hanging around town, going to UMass, going to the local shopping center, and cruising. "Partying" can be generally described as being with a group of people at a variety of informal places (except for home) and engaging in a number of social activities such as going to parties and getting drunk or high.

The "housework" factor was defined by performing general housework such as cleaning house and washing dishes, as well as cleaning one's own room. This factor was defined by the same questions with nearly the same loadings for each age group.

The "parent" factor was characterized by talking with parents, sharing problems with parents, and loving parents.

All three age groups had a high negative loading on not keeping problems to one's self, indicating that problems were shared with someone. In the younger two age groups especially, this other person was an adult, including parents, other family members, and teachers. This factor can be generally described as relating to parents, both conversationally and when a personal problem needs to be solved. The high loadings in the problem solving section indicate a trust in other adults as well.

The "sports" factor was defined by participation in unorganized sports and in organized sports. These were the only sports-related items on the questionnaire. In the two younger age groups, being with one or two friends also loaded highly on this factor. This may be explained by the fact that many sports require only a few participants such as playing catch, playing tennis, shooting baskets, etc.

The "organized activities" factor was characterized by high loading on participation in school activities, non-school activities, and church activities. Although this specific factor only appears in the two younger age groups, participation in school and church activities loads highly on the school factor in the oldest age group.

The "school" factor was defined by a high opinion of school and a high opinion of teachers. This factor appears in the youngest and oldest age groups only. In the oldest group, this factor is additionally defined by a high phase

(the tracking system used by the school system) English class and doing homework, as well as by participation in school and church activities. There were high negative loading for getting drunk and getting high, going to bars, and getting into trouble. For the youngest age group, the school factor is described by attitudes toward school and teachers, while the oldest group is more elaborately defined by additional activities and behaviors related to interest in school.

The "dating" factor is basically defined by going on dates and being with one's boyfriend or girlfriend. This factor appeared in the older two age groups only. In the 16 and 17 year old group, it is additionally defined by talking on the phone while at home and sharing problems with a friend. This perhaps is related to aspects of the dating relationship.

The relative ordering of the six factors for each age group is shown in Table 1. "Partying" was the activity shared most commonly among the three age groups with "housework" being the second most common activity (third in the oldest group). "Organized activities" were popular with the youngest age group, declining in popularity in the middle group, and disappearing totally in the oldest group. "Parents" are a moderate interest in all three groups. "School" is a low interest for the youngest group and of no interest in the middle age group. It becomes a very common interest

in the oldest group. "Sports" is of low to moderate interest in all the groups. "Dating" becomes an activity for only the older two groups. The factors accounted for 38.5% of the total variance in the 12 and 13 year old group, 39.0% in the 14 and 15 year old group, and 37.3% in the 17 year old group.

Cluster Analysis. Each respondent was now represented both by the raw data from the questionnaire and by a set of factor scores that related to his or her involvement with six traditional activities important to his or her respective age group. Each subject could therefore be represented in terms of his or her pattern of raw scores or by his or her pattern of factor scores. The ultimate goal was to group subjects according to their similarity of involvement in traditional activities. Using a cluster analysis, subjects could be grouped according to their actual answers or according to the inferred factors discovered by the factor analysis. Cluster analysis is a mathematical process of sorting observations or subjects into groups so that the "natural association" is high within clusters and low between clusters (Anderberg, 1974). Cluster analysis differs from factor analysis in the mathematical way cases or variables are partitioned into groups. In factor analysis, groups (or factors) are inferred from the inter-correlations among cases or variables, while cluster analysis represents these entities

spatially and groups them according to their closeness in the representational space.

It could be argued that it would have been preferable to use the raw questionnaire data in the cluster analysis since they were the actual observations produced by the subjects. There were two difficulties in doing this, however. If all the data were used in the cluster analysis, it would create a computational problem too big for the computer to handle. Even reducing the data to the set of 49 questions used in the factor analysis was too large, given the number of subjects involved. The second problem was the formation of the clusters themselves. Even if computer capacity was of no concern, a large number of variables would result in an even greater number of possible patterns of answers, and consequently a large number of clusters. These clusters would have a relatively small number of cases since the odds of many subjects having similar patterns of answers given a large (or even moderate) number of variables was rather small. As was mentioned previously, six variables seemed to be the optimal number. No six questions, however, could adequately span the variety of traditional involvement necessary to form meaningful clusters.

Using factor scores solves both of these problems, but creates another. Since there were at most 15 factors to consider, the problem was well within the computer's limitations. However, 15 was still too large to produce a

meaningful number of clusters. It was easy, however, to choose from these factors six that spanned a variety of traditional interests and activities. It should be noted that there is a weakness in using factor scores as observations in a cluster analysis which stems from one of the inherent weaknesses of factor analysis. The score on each individual questionnaire item is assumed to consist of two parts, communality and uniqueness. Communality is that part of the item score which contributes to the variance shared with the other scores with which it is correlated. It is these shared or common variances which are designated as factors. Uniqueness is that part of the score which is unique to that particular item. The communality represents the underlying processes that are assumed to be responsible for the way a subject answers the questionnaire while the uniqueness represents the amount of error entailed in tapping those processes. Unfortunately, the process of factoring can only estimate the communality and uniqueness. Factor scores are calculated from the communality estimates and are therefore themselves only estimates of what a subject might have answered had the question been able to measure the assumed factors directly. As compelling as it is to use factor scores in statistical analyses, it should be remembered that they are not actual observations but estimated values.

The use of factor scores to test hypotheses in multiple

regression and analysis of variance has been recommended (Kerlinger and Pedhazur, 1973) despite the estimation problem. The potential difficulty with using factor scores in cluster analysis is that subjects could be put into incorrect clusters due to error in estimation of the communalities and consequent error in the factor scores. The factor score method was chosen in this case, however, because of the lack of a more satisfactory alternative. The disadvantage of a small amount of error but the advantage of a meaningful group of clusters far outweighs the problems of not using raw data. The large sample size further diminishes the disadvantage of the factor score approach since small numbers of incorrectly clustered cases would be outweighed by large numbers of correctly clustered ones.

The cluster analysis technique used was the BMDP2M case clustering program (Dixon, 1975). This analysis is a hierarchical, agglomerative algorithm. The data are initially represented as points in a six-dimensional space with each factor representing a dimension and the factor scores representing the value of the points along their respective dimensions. The factor scores are in standard form with a mean of zero and a standard deviation of one. In the beginning, each case is considered to be a separate cluster. The program computes the Euclidean distance between all the clusters and chooses the two closest ones to be amalgamated, creating a new cluster containing two clusters. This new

cluster is represented as one point by calculating the midpoint between the two original clusters. The distance between all the clusters is calculated again and the next two closest clusters are joined and so on until all the clusters are amalgamated into one cluster containing all the cases. The clustering process output is a printed tree showing the hierarchical ordering of each cluster as it is joined to another and the amalgamation distance before clusters are joined.

The selection of a set of useful clusters is left to the discretion of the user. Clusters can be chosen early in the joining process, a decision which yields many clusters with few cases in each one, or they can be chosen from those formed later in the joining process, thereby yielding fewer clusters with many cases in each one. The consideration that is of prime importance when choosing clusters is ease of interpretation. Early clusters are too numerous and too unique to be helpful in perceiving general characteristics of the population, whereas later clusters are too crude a representation of those characteristics. The fewest number of clusters portraying a sufficient amount of variability in describing the characteristics of the three groups was desired in the present case for ease of interpretation. An initial partitioning of clusters was made and the mean value for each factor was calculated for each cluster as well as the respective maximum and minimum values. These values

were graphed, at which point it was determined that no further selection of clusters was necessary because the means appeared to be a good representation of the range of scores for each factor.

Not every case fell into a well-defined cluster, however. A second cluster analysis was performed on the residue (suggested by Anderberg, 1974) to see if there were any undetected patterns, but the remaining cases were too different to be joined in any meaningful way. These cases were therefore excluded from the remaining analyses.

There were 15 clusters in the 12 and 13 year old group. There were 301 cases that fell into these clusters, or 90.6% of the original group. There were 22 clusters in the 14 and 15 year old group, consisting of 430 cases, or 96.0% of the original group. There were 15 clusters in the 16 and 17 year old group, consisting of 258 cases, or 86.6% of the original group.

Each cluster could now be described in terms of its members' involvement in the six activities represented by the factors. The means of each of the clusters on each factor is presented in Table 2. Factor scores are in normalized form with a mean of zero and a standard deviation of one. Positive means indicate an above-average involvement on that factor while negative means represent below-average involvement. The scores on the "partying" factor have been reversed so that a positive score shows a low

involvement in that activity. This was done because a high involvement in partying was seen as an aspect of low traditional involvement.

The members of some clusters were clearly very traditionally oriented as can be seen from high means on several or all of the factors (see Table 2). Other clusters have low scores on some or all of the factors, indicating a low involvement in traditional activities. However, most of the clusters show a mixed pattern of means with both high and low traditional involvement. To arrange the clusters in order of traditional involvement, a composite mean was calculated by adding the six means together for each cluster. The clusters were then arranged in the order of their composite mean and graphed (see Figure 1). The "average" traditionally involved clusters have a composite mean of near zero, "traditional" clusters have positive composite means, and "non-traditional" clusters have negative means. The clusters are relatively evenly distributed about the mean in all three groups, with some clusters being skewed toward the extreme "non-traditional" side of the distribution for the younger two age groups. The "traditional" groups are larger in both the younger and older groups by nearly 40% in each group. This is the reverse for the 14 and 15 year old group where the "non-traditional" group is a third larger than the "traditional" group".

After arranging the clusters according to traditional

involvement, the number of Youth Center attenders in each cluster was calculated. This included all three categories of Youth Center attendance, "began going recently", "go off and on", and "gone regularly for a long time". A chi-square test showed that Youth Center attenders were not disproportionately excluded from the clusters. There were the same proportion of attenders in the residue as there were in the clustered sample in all three groups ($\chi^2 = 0.147$ for the 12 and 13 year old group, $\chi^2 = 1.342$ for the 14 and 15 year old group, and $\chi^2 = 0.259$ for the 16 and 17 year old group; $p > .05$, $df = 1$).

When looking at Figure 1, it appears that the Youth Center attenders are located mostly on the "non-traditional" side of the graph. To determine if this was in fact true, a multivariate test was used to see if the Youth Center attenders were significantly more non-traditional than the population for each group. The test statistic used was $N(\bar{\underline{X}} - \underline{\mu})' \Sigma^{-1} (\bar{\underline{X}} - \underline{\mu})$, where N is the number of attenders, $\bar{\underline{X}}$ is the vector of six factor means for the attender group, $\underline{\mu}$ is the vector of the six factor means for the population, and Σ is the variance-covariance matrix (with the variances on the diagonal and the covariances on the off diagonal). This statistic is distributed as χ^2 with p degrees of freedom (p is the number of dependent variables) (Morrison, 1976). The test showed that the attenders in both the 12 and 13 year old group and the 14 and 15 year old group were

significantly more "non-traditional" than their respective populations ($\chi^2 = 59.670$ and 60.869 , respectively; $p < .001$, $df = 6$). The difference between attenders and the population failed to reach significance in the 16 and 17 year old group ($\chi^2 = 8.622$, $p > .05$, $df = 6$).

C H A P T E R I I I

DISCUSSION

The present study found that the Youth Center attenders are significantly less traditionally oriented than the population they come from for both 12 and 13 year olds and 14 and 15 year olds. The difference in the 16 and 17 year old group failed to reach significance, perhaps due in part to the low number of attenders within that age group. Since the stated goal of the Youth Center is to reach young people who are not being served by existing traditional activities, it can be concluded that the Center is reaching those young people it was intended to serve. The "non-traditional" youths are not the only ones attending the Youth Center, though. Figure 1 shows that Youth Center attenders span the range of "traditional" orientation and interests. The primary impact, however, is on those young people, 12-15 years old, who have less than average involvement in the traditional activities represented by the six factors in their respective age groups.

Another finding of this study is the extent of "non-traditional" involvement in the three age groups. Just less than half (47.3%) of Amherst youth are non-traditionally oriented (this varies for each age group: 41.5%, 57.0%,

and 41.9% for the youngest, middle, and oldest groups, respectively). The effectiveness of the Youth Center can be viewed in this context. Previous studies have looked at the attributes of their client populations without reference to the characteristics of the population from which their clients come. It is one thing to know that a program is reaching the desired clientele, it is quite another matter to compare the population served to the total need. In the present case, the Youth Center wishes to serve the population of "non-traditional" youth. The Center is reaching 24.8% of the 12 and 13 year old "non-traditional" group, 15.9% of the 14 and 15 year old "non-traditional" group, and only 5.6% of the 16 and 17 year old "non-traditional" group. These percentages show that the Youth Center is most effectively reaching the youngest age group and barely reaching the oldest age group. On the whole, the Center is reaching a minority of those who presumably need services oriented to their interests and values.

It can be concluded that the Youth Center is reaching the population it was established to serve but that a greater effort is needed to reach a larger proportion of "non-traditional" youth. The existence of the large number of such youth indicates that services of this kind are necessary. The value of the Youth Center's efforts are clearly apparent as an alternative youth service. Rather than question whether to continue to support the Youth Center,

the community should move to reconsider the focus of other existing youth services to see what can be done to better meet the needs of "non-traditional" youth. The programs of the Youth Center should be increased and strengthened so that it may increase its service to the community.

Improving the Present Model. The method of evaluation used in the present study can hopefully serve as a model for other programs wishing to determine what their target population is like in the community and to what extent it is reaching that population. The questionnaire itself provides a comprehensive assessment of the activities, interests, and opinions of the young people in the community. This information alone could be potentially useful to many kinds of programs involved with youth in planning activities consistent with current interests and needs. However, such an extensive questionnaire does not appear to be necessary for the factor and cluster analytic part of the evaluation reported here. Only about half of the questions were used in the factor analysis, and just two kinds of those questions actually determined the six factors which were eventually used in clustering. The questions which were not used in the factor analysis could be eliminated from future questionnaires, using questions that relate to the areas that appeared as factors, e.g., leisure activities, home and parents, school, organized activities, sports, and

dating. The answers to these questions could be factor analyzed in the same way, with the resulting factors probably accounting for more of the variance than was obtained by the present case.

A major feature of the technique used to evaluate the Youth Center was the extensive use of the computer to obtain the results. The study required a computer that was capable of sophisticated statistical analysis as well as the money and research skill necessary to perform the analysis. These requirements make the present design difficult, if not impossible, for the alternative youth service to use to evaluate its programs. The lack of simple and inexpensive, yet rigorous evaluation methods may be our reason for the lack of good evaluations of youth programs.

The alternative to using the factor analysis method would be to construct a questionnaire that covered several areas of interests similar to the factors used in the present study. Rather than factor analyzing the responses, the item scores could be summed within each area and the subscores would be used in the cluster analysis rather than factor scores. This method would eliminate the factor analysis, and thus reduce a major financial and statistical component of the procedure. It also eliminates a significant concession made in reducing the data via factor analysis and using factor scores rather than actual observations. The subscores are not actual responses, but they are

calculated directly from the item scores and not estimations as factor scores are. An advantage of the factor analysis approach is that factors emerge for each age group in accordance with developmentally different interests and activities. This would not happen using a subscore approach. Each age group would be described by preset areas of interest. For example, "dating" was not a factor in the youngest age group as it was in the older two groups. The factor analysis did, however, pick six areas appropriate to the 12 and 13 year old group. If there was an area of questions covering "dating" in a questionnaire and a "dating" subscore was calculated, a large majority of younger respondents may score very low, thus effectively eliminating that area as a component in the cluster analysis. A possible solution to this problem might be to construct two questionnaires, one for junior high students and the other for senior high students.

A feature of the factor score approach is that the factor analysis chooses factors which are uncorrelated. A score on any one factor does not influence the score on any other factor, so any configuration of factors is possible for a particular subject. Also, the contribution of responses to individual questions is weighted (via factor loadings) when factor scores are calculated. This is another way that developmental differences are taken into account. For example, "partying" appeared as a factor in all three

age groups, but different questions loaded differently on that factor for each group. What constitutes "partying" for one age group for a 13 year old may be different for a 17 year old.

The subscore approach cannot assure uncorrelated subscores and all questions receive equal weightings. There is no theoretical reason, however, to suggest that factors which determine subjects' degree of involvement in various traditional activities are actually uncorrelated. Thus the subscore approach may reflect the underlying structure of interests more accurately than the factor score approach. The problem with correlated subscores, given that there is a moderate to high correlation among two or more subscores, is that only one of those subscores may be needed in the cluster analysis since it predicts the values of the other subscores with which it is correlated. Each question receives equal weighting and therefore does not allow for age differences the way factor analysis can. This is another problem that can conceivably be solved by using different questionnaires for older and younger subjects.

Once the questionnaire results have been reduced either by a factor score or subscore approach, the representative data serves as the basis for sorting subjects into groups according to similar profiles. Cluster analysis is probably the most efficient way of grouping subjects. However, cluster analysis requires more core memory space in the computer

than most other statistical methods, which limits the size of the population used in the analysis. Depending on the size of the number of variables used, the number of cases is limited since the distances between all pairs of points is calculated at each stage of clustering. When fewer variables are used, a larger number of subjects can be used, but still most cluster analysis programs have a relatively small capacity. For example, the program used in the present study has a capacity of 733 cases when six variables are used. The capacity of the clustering program used determines the effective limit of the size of the sample.

While 733 (for six variable clustering) seems like quite a large number of subjects, the nature of the research problem dictates that a larger sample be used than would normally be the case. If the goal were simply to describe the population in terms of the "traditional"—"non-traditional" continuum, a relatively small sample could be used. But the ultimate goal was to discover how many Youth Center attenders were in each of the clusters. Since the number of Youth Center attenders was known to be relatively small, it was feared that the use of a small sample would exclude so many attenders that there would be no evidence of Youth Center attendance in some clusters when that was really not the case. This concern was borne out in the final solution since many clusters had only one or two cases in them. These may not have appeared had a smaller sample been used.

A representative sample could be conceivably used when the number of clients of a particular program is known to be large relative to the total population.

Uses of Other Evaluation Methods. Once the impact of a program is known, another important question remains. It is important to assess the extent of its impact so that it is known whether a program is reaching its intended clients. In the case of an alternative youth program, if it is reaching young people who are already being served by existing programs, then the program is not an alternative at all but rather it is duplicating existing services. But once it is known who a program is serving, the next question is whether the program is producing a change in the persons involved in it. This assessment requires quite a different set of methods than does the attendance assessment. Such a study at the Youth Center would investigate changes along those dimensions indicated by the goals of the Center as important aspects of adolescent growth. Changes in these areas could be judged as successful "outcome". Community standards, particularly those articulated by the Youth Advisory Committee would also have to be taken into account when judging the effectiveness of the Center. Certainly individual programs offered by the Center should be evaluated to see if they are accomplishing their goals. Adequate evaluation information would allow the Center staff to make

decisions concerning its programs and activities, in regard to continuing, changing or eliminating particular offerings.

In many cases, the thorough outcome study is not possible given the nature of a particular program. For example, the Youth Center sponsors social activities such as dances and coffee houses on a monthly basis. It would be difficult to measure changes in individuals as a result of their attendance at one of these activities. The effectiveness of a dance might be better determined by the number of people who came or the amount of money the Center raised by charging admission. A person's sense of satisfaction with the community might increase, or perhaps the level of social skills might improve because of social activities, but these would be difficult to attribute to the offerings of the Youth Center. In this case, a study which showed the extent of youth involvement would be the best measure of the success of a program. If by offering more activities the Youth Center increased the number of "non-traditional" youth it reached, then those activities could be deemed successful.

Other factors may also interfere with an adequate measure of the changes produced by the Youth Center. There seems to be a group of regular attenders, but no records are kept as to who comes on which day. Although it is possible to keep such records, the informal nature of the program militates against accurate record keeping of this kind. Since there are no real "treatment" programs, it is difficult

to measure changes as a result of treatment. Rigorous studies involving control groups or random assignment of "clients" to "treatment" would be difficult due to the informality of the program. In most circumstances, the most informative evaluation possible would be one which determined how well the Youth Center was reaching previously unreached youth.

Too often young people are excluded from traditional activities offered by school, church, and community organizations because their interests or values are not compatible with the orientation of those programs. This does not mean that these young people are troubled or deviant; in many cases it merely means they are different. Ignoring these young people may contribute to feelings of alienation and dissatisfaction they may have. Rather than require disaffected youth to be involved in existing activities, the community has a responsibility to offer opportunities to the full spectrum of youth. In attempting to do this, evaluation is necessary to determine whether new programs are duplicating services or truly offering an alternative.

FOOTNOTES

¹In many cases it was clear when a respondent did not take the questionnaire seriously. If sarcastic remarks or obscenities were written on the questionnaire, it was removed. Questionnaires were also eliminated if the respondent circled blocks of numbers with one circle, indicating that each question had not been considered separately. There was no way of knowing if a respondent answered seriously and honestly if each question was answered and no remarks were written to indicate otherwise. Undoubtedly, however, there were some questionnaires used in the analysis that were not answered truthfully, but the large sample reduced the possibility that these would invalidate the results. The vast majority of those eliminated were incompletely filled out, and therefore were obviously unsuitable for use in the analysis.

²All questions that yielded dichotomous data were eliminated because the narrow range of choices would not allow sufficient discrimination. Questions with categorical data were not used since values were assigned arbitrarily to responses and discrimination was not possible using factor analysis. Other questions were eliminated if they were not applicable to all subjects. For example, in the section on participation in activities at home, 15e ("talk with my brother/sister") was not used because not every respondent could be expected to have a brother or sister.

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Table 1
Factors Used in the Cluster Analysis

12 and 13 year olds

1. Partying
2. Housework
3. Organized
activities
4. Parents
5. School
6. Sports

14 and 15 year olds

1. Partying
2. Housework
3. Parents
4. Sports
5. Organized
activities
6. Dating

16 and 17 year olds

1. Partying
2. School
3. Housework
4. Parents
5. Sports
6. Dating

Table 2

Factor Means, Composite Means, Number of Students in Clusters,
and Number of Youth Center Attenders in Clusters

12 & 13 year olds

Partying	Housework	Organized Activities	Parents	School	Sports	Composite Mean	Total No. of Students	Number of Youth Center Attenders
-1.975	.642	-.064	-.633	-1.051	-1.115	-4.196	9	1
-1.436	-.960	-.771	.263	.470	-1.149	-3.583	7	6
.805	-1.359	-.241	.001	-.500	-.466	-1.760	8	0
-1.233	-.392	-.556	-.705	.807	.353	-1.726	14	6
.325	.043	-.544	-.646	.824	.023	-1.623	35	4
-1.075	-.395	-.092	.084	-.210	.128	-1.560	37	11
.430	.211	.464	-1.650	-1.073	.505	-1.113	7	0
.074	.328	-.712	1.121	-1.005	-.443	-.637	8	3
.854	.484	-.176	-1.111	.467	-.469	.049	22	1
.572	-.419	-.401	.247	.414	.278	.691	48	1
.125	.682	-.483	.704	.428	-.422	1.034	25	2
.275	.018	1.083	.318	.089	-.243	1.540	44	1
.590	-1.109	1.205	-.172	.311	.995	1.820	9	0
-1.319	.453	-.114	.912	.957	1.076	1.965	7	4
.033	1.047	.841	.379	-.131	.891	3.060	21	1
						TOTAL	301	41

Table 2 (Continued)

14 & 15 year olds

Partying	Housework	Parents	Sports	Organized Activities	Dating	Composite Mean	Total No. of Students	Number of Youth Center Attenders
-1.641	-1.073	-1.016	-1.549	-.131	-1.122	-6.532	7	5
-.412	-.743	-.870	.758	-.690	-1.255	-3.212	13	1
-1.256	.333	-.534	-.634	-.466	-.269	-2.826	39	18
-.438	-1.007	-.751	.446	-.516	.513	-1.753	22	2
1.159	-1.028	-.299	-.999	-.521	.390	-1.298	18	1
.120	-.673	-1.152	-.487	1.411	-.204	-.985	10	0
-.573	.018	-.884	.938	.182	-.299	-.618	7	2
.792	-.562	-.361	-.097	-.027	-.306	-.561	51	2
-1.210	.612	.979	.346	.009	-1.257	-.521	10	2
1.150	.914	.043	-.985	-1.078	-.424	-.380	8	0
-.509	-.259	.285	.328	-.121	-.090	-.366	43	3
.688	-.452	.909	-.792	-.402	-.138	-.187	17	3
-.095	.998	1.161	-.402	-.715	-.674	.273	7	1
-.029	.378	-.234	.007	-.130	.876	.868	25	3
-.251	.544	-.980	.002	.331	1.365	1.011	12	0
.445	1.387	-.565	.312	-.117	-.294	1.168	18	0
-.867	-.561	.319	1.086	.504	.863	1.344	18	3
.681	.314	.528	-.454	.920	-.597	1.392	26	1
1.155	-.353	-.692	.968	.861	-.315	1.624	6	0
.860	.437	.537	.658	-.399	-.316	1.777	21	2
.313	1.086	.032	-.042	-.587	1.831	2.633	9	1
-.005	.388	.807	.363	.628	.489	2.670	43	2
TOTAL							430	52

Table 2 (Continued)

16 & 17 year olds

Partying	School	Housework	Parents	Sports	Dating	Composite Mean	Total No. of Students	Number of Youth Center Attendees
-1.062	-.785	-.551	-.776	1.024	-.468	-2.618	10	0
-.461	-1.346	-.097	-.243	-.582	.184	-2.545	28	3
-.644	-.206	-1.128	.007	.655	-.380	-1.696	12	0
1.009	-.049	-.347	-.683	-.742	-.775	-1.567	16	1
-.469	-.009	-.065	.154	-.489	-.014	-.892	34	2
.874	-.688	1.280	-1.246	-.249	-.650	-.679	8	0
.435	.658	-.752	-.571	.242	.024	.036	25	0
-1.445	-.083	.103	1.293	.549	-.015	.402	13	0
-.689	.855	.749	-.422	.530	-.491	.532	9	0
.674	.495	.339	.817	-.209	-.938	1.178	25	0
-.119	-.040	.017	.328	.680	.707	1.573	28	3
.472	1.269	.120	.563	-.977	.187	1.634	16	0
-.620	.911	.477	-.034	.376	1.212	2.322	12	0
1.273	-.264	.152	.561	-.054	.686	2.354	8	1
.652	.261	1.179	-.075	1.240	-.238	2.497	14	0
						TOTAL	258	10

Figure 1-a
YOUTH CENTER ATTENDANCE
12 and 13 year olds

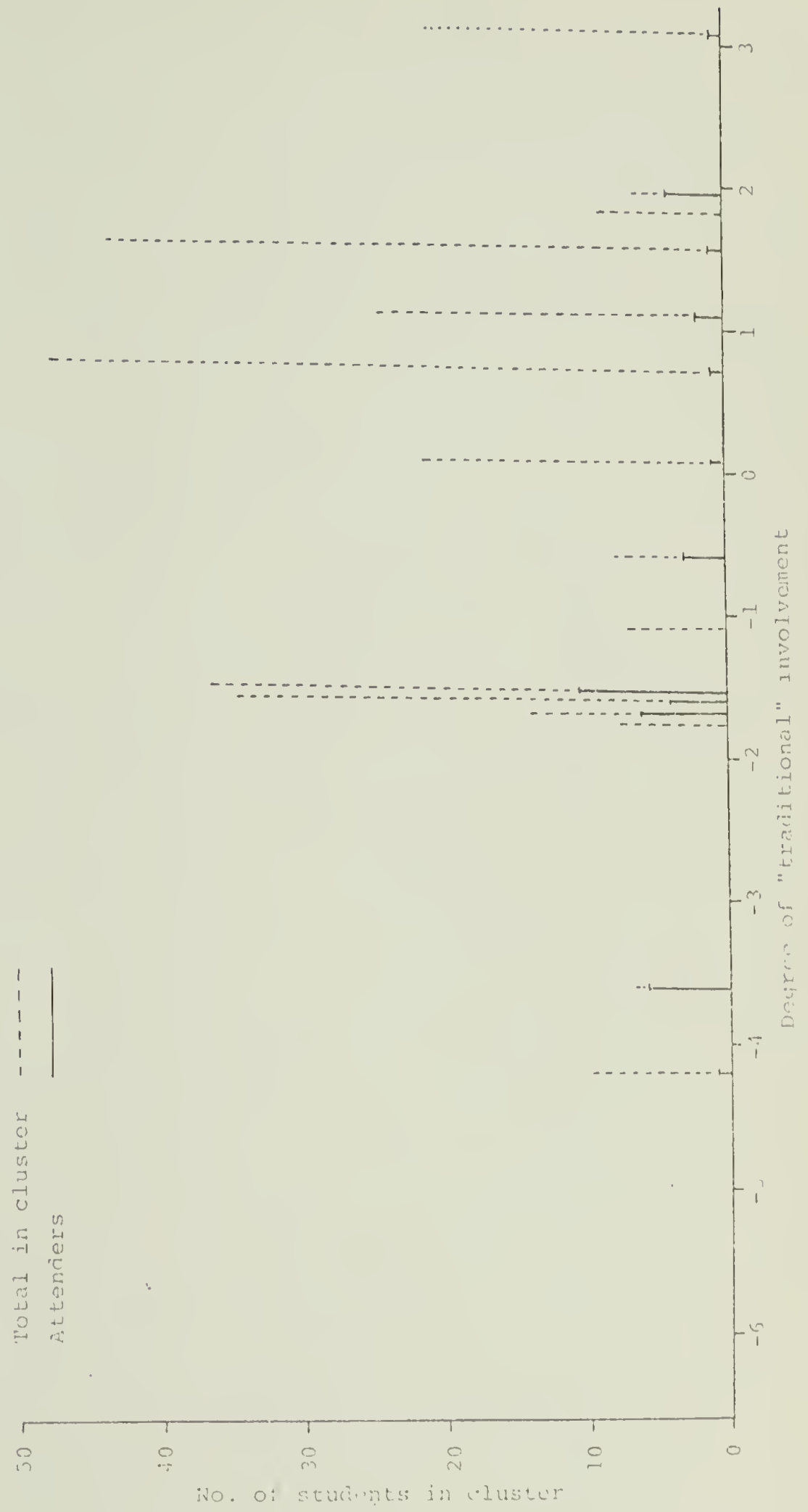


Figure 1-B
YOUTH CENTER ATTENDANCE
14 and 15 year olds



Figure 1-C
YOUTH CENTER ATTENDANCE
16 and 17 year olds



APPENDIX A

QUESTIONNAIRE

Many people and groups in town are interested in finding out how people in the Junior High and High School spend their time and if there is very much to do in Amherst. We would appreciate it if you could help us by answering this questionnaire. Please answer as honestly as you can. We are not interested in your name and of course, all answers will be strictly confidential. We plan to use the information for planning programs and activities that are responsive to your needs and interests. Thanks for helping.

1. How old are you? ____

2. Sex: (circle one) male female

3. Where do you live: (check the area you live in or the closest to where you live)

- ____ center of Amherst
 ____ North Amherst
 ____ South Amherst
 ____ East Amherst
 ____ Pelham
 ____ Shutesbury
 ____ Leverett

4. Who do you live with: (check one)

____ both parents ____ mother ____ father ____ sometimes mother, sometimes father ____ neither

5. In general, what are the ages of your friends: (check one)

- ____ they are younger than me
 ____ they are about the same age
 ____ they are older than me

6. When you do things in your free time, how often do you:
 (circle a number for each category according to how often you do each one)

	never	rarely	sometimes	often	always
a. spend time alone	1	2	3	4	5
b. hang around with only one or two people	1	2	3	4	5
c. hang out with a group of people	1	2	3	4	5

7. What organized activities do you participate in:
 (circle a number for each category according to how often you do it)

	never	rarely	sometimes	often	always
a. school club or activity (e.g. drama, band, language club, debate, etc.)	1	2	3	4	5
b. church group and/or other church activities	1	2	3	4	5
c. play unorganized sports (e.g. pick-up games, tennis, shoot baskets, etc.)	1	2	3	4	5
d. play organized sports (school teams, Babe Ruth Baseball, swim team, etc.)	1	2	3	4	5
e. organizations not related to school (e.g. scouts, 4-H, etc.)	1	2	3	4	5
f. organized places to go (e.g. Youth Center, Boys' Club, Girls' Club, etc.)	1	2	3	4	5

8. When you are just hanging around, what do you do:
(for each activity, circle a number according to how often you do it)

	never	rarely	sometimes	often	always
a. go to the Mall	1	2	3	4	5
b. go to the center of town	1	2	3	4	5
c. go to UMass (e.g. Campus Center)	1	2	3	4	5
d. go to a restaurant	1	2	3	4	5
e. stay at home	1	2	3	4	5
f. go to a friends house	1	2	3	4	5
g. go to a bar	1	2	3	4	5
h. walk around	1	2	3	4	5
i. go cruising	1	2	3	4	5
j. work on cars/motorcycles	1	2	3	4	5
k. be with my boyfriend/girlfriend	1	2	3	4	5
l. get drunk	1	2	3	4	5
m. get high	1	2	3	4	5
n. use other drugs (e.g. speed, acid, etc.)	1	2	3	4	5

9. What do you usually do on weekends:
(for each activity, circle a number according to how often you do it)

	never	rarely	sometimes	often	always
a. go to a party	1	2	3	4	5
b. go to a dance	1	2	3	4	5
c. go to a concert	1	2	3	4	5
d. go on a date	1	2	3	4	5
e. go to work	1	2	3	4	5
f. just hang around	1	2	3	4	5

10. When you go out:
(for each category, circle a number according to how often you do it)

	never	rarely	sometimes	often	always
a. go out on a date with just one person	1	2	3	4	5
b. go out with a group of the same sex	1	2	3	4	5
c. go out with a group of both sexes	1	2	3	4	5

11. For the most part, when it comes to going out with some one:
(check the alternative that describes you best)

- ☐ I go out/go steady with the same person for a long time
☐ I go out with several people
☐ I only go out occasionally
☐ I pick up a person just for the night
☐ I never go out with anyone

12. What is your opinion of Amherst:
(check the alternative that best describes your opinion)

- ☐ Amherst is a great town and there is plenty to do here
☐ Amherst is a nice town and there are enough things to do here
☐ Amherst isn't a nice town and it's hard to think of things to do around here
☐ Amherst is a terrible town and there is nothing to do around here

13. What kind of music do you enjoy the most:
(check the alternative that describes you the best)

☐ disco
☐ hard rock (e.g. Kiss, Aerosmith)
☐ stoned rock (e.g. Pink Floyd, Moody Blues)
☐ soft rock (e.g. James Taylor, Joni Mitchell)
☐ country/western

14. When you're at home, how often do you do the following things:

	never	rarely	sometimes	often	always
a. stay in my room	1	2	3	4	5
b. listen to music	1	2	3	4	5
c. talk on the phone	1	2	3	4	5
d. talk to my parents	1	2	3	4	5
e. talk with my brother/sister	1	2	3	4	5
f. watch TV	1	2	3	4	5
g. do housework	1	2	3	4	5
h. do homework	1	2	3	4	5
i. pursue my interests (e.g. hobby, play an instrument, read, etc.)	1	2	3	4	5

15. What responsibilities do you have at home:
(for each alternative, circle a number according to how often you do it)

	never	rarely	sometimes	often	always
a. clean house	1	2	3	4	5
b. babysit	1	2	3	4	5
c. cook	1	2	3	4	5
d. wash dishes	1	2	3	4	5
e. yardwork	1	2	3	4	5
f. clean my room	1	2	3	4	5

16. In general, when you stay at home is it because:
(check the alternative that describes you best)

☐ I enjoy spending time at home
☐ there's nothing else to do
☐ there are things I have to do at home
☐ my parents make me stay at home

17. What do you usually do for money:
(check the alternative that describes you best)

☐ full-time job ☐ part-time job ☐ occasional odd jobs ☐ money from parents

18. How much freedom do your parents give you:
(check the alternative that describes you best)

☐ I can do anything I want, my parents don't care
☐ I only have a few restrictions
☐ my parents are somewhat strict
☐ I can never do anything I want to do

19. How do you feel about your parents:
(check the alternative that describes your feelings best)

- ☐ I really love my parents and enjoy being with them
- ☐ I like my parents and enjoy spending some time with them
- ☐ My parents bother me and I like to spend time with them only occasionally
- ☐ I dislike my parents and never enjoy spending time with them

20. How many classes are you taking? ____

21. What phase is your English class? ____

22. What are the grades you usually get? ____

23. Are you in any kind of alternative academic program (e.g. ALPS, IPC, work study, Learning Community, etc.)
(circle one) yes no

24. As of now, what are your school plans:
(check the alternative that describes your plans the best)

- ☐ I plan to go to college
- ☐ I plan to get some kind of vocational/technical education
- ☐ I plan to finish high school and get a job
- ☐ I plan to drop out of school

25. How much do you enjoy school:
(check the alternative that describes your feelings best)

- ☐ I really enjoy school and I get a lot out of it
- ☐ I like school most of the time and sometimes I get something from it
- ☐ I don't like school, but I sometimes get something out of it
- ☐ I tolerate school and rarely get anything out of it
- ☐ I dislike school and never get anything out of it

26. What do you think of the Amherst school system:
(check the alternative that describes your feelings best)

- ☐ The teachers are very competent and the classes are very good
- ☐ The teachers are good and many of the classes are good
- ☐ Only a few of the teachers are good and most of the classes are poor
- ☐ The teachers are bad and none of the classes are any good

27. How do you solve problems in your personal life:
(for each alternative, circle a number according to how often you do it)

	never	rarely	sometimes	often	always
a. keep it to myself	1	2	3	4	5
b. ignore it	1	2	3	4	5
c. forget about it by getting drunk or high	1	2	3	4	5
d. talk to a friend	1	2	3	4	5
e. talk to a family member	1	2	3	4	5
f. talk to a teacher or guidance counselor	1	2	3	4	5
g. talk to an adult friend	1	2	3	4	5
h. see a professional counselor or therapist	1	2	3	4	5

28. Do you smoke cigarettes: (check the alternative that is most descriptive of you)

- ☐ no, I don't smoke
- ☐ I only smoke occasionally
- ☐ I smoke about a pack a day
- ☐ I smoke more than a pack a day

29. What kind of transportation do you use:
(for each alternative, circle a number according to how much you use it)

	never	rarely	sometimes	often	always
a. drive a car or motorcycle	1	2	3	4	5
b. have a friend drive me	1	2	3	4	5
c. have my parents drive me	1	2	3	4	5
d. hitch hike	1	2	3	4	5
e. ride the bus	1	2	3	4	5
f. ride a bike	1	2	3	4	5
g. walk	1	2	3	4	5

30. What kind of trouble have you ever been in:
(check the alternative that describes you best)

- ☐ I've never been in any kind of trouble
- ☐ school disciplinary action (e.g. detention, suspension, expulsion)
- ☐ minor offenses (e.g. shoplifting, vandalism, etc.)
- ☐ serious offenses (e.g. breaking and entering, theft, larceny)

31. Have you ever heard of the Amherst Youth Center before today?

(circle one) yes no

32. Do you know where it is?

(circle one) yes no

33. Do you ever go to the Youth Center:
(check the alternative that describes you best)

- ☐ I've never been
- ☐ I used to go, but I don't go anymore
- ☐ I only began going recently
- ☐ I go off and on
- ☐ I've gone regularly for a long time

34. If you haven't gone to the Youth Center (or stopped going), why:
(check the alternative that describes you best)

- ☐ I never heard of it
- ☐ my friends don't go there
- ☐ I don't like the people who go there
- ☐ poor location
- ☐ I already have enough other things to do
- ☐ it's hard for me to try out new places

35. How did you hear about the Youth Center:
(check the alternative that describes you best)

- ☐ I've never heard of it before
- ☐ from a friend
- ☐ from a newspaper or posters
- ☐ from a parent or other adult
- ☐ from a teacher or guidance counselor

36. If you've gone, which activities did you participate in:
(check the alternative that describes you best)

- ☐ drop-in
- ☐ organized activities
- ☐ committees and/or meetings
- ☐ a combination of the above

37. Did you enjoy what you did there:
(check the alternative that describes your feeling best)

- ☐ I really enjoyed it
- ☐ I enjoyed it
- ☐ I didn't enjoy it
- ☐ I've never been

